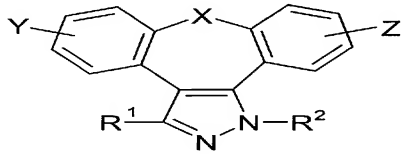
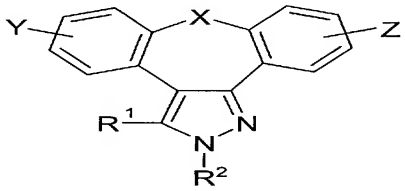
AMENDMENTS TO THE CLAIMS

1. (Currently amended) ~~Use of the compounds of the general~~ A method of treating a disease, damage or disorder of the central nervous system associated with a disorder of neurochemical equilibrium of a biogenic amine or other neurotransmitter, comprising administering to a subject in need thereof a compound of ~~formula I~~ formula IA or formula IB



IA



IB

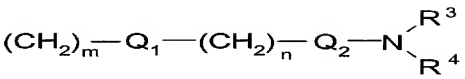
I

wherein

X ~~means~~ is selected from the group consisting of ~~CH_2 or a heteroatom selected from a group consisting of~~ CH_2, O, S, S(=O), S(=O)$_2$ and NR^a, wherein R^a is selected from the group consisting of hydrogen, ~~or a substituent selected from the group consisting of~~ C_1-C_3-alkyl, C_1-C_3-alkanoyl, C_1-C_7-alkoxycarbonyl, C_7-C_{10}-arylalkyloxycarbonyl, C_7-C_{10}-aroyl, C_7-C_{10}-arylalkyl, C_3-C_7-alkylsilyl and C_5-C_{10}-alkylsilylalkyloxyalkyl;

Y and Z are each independently ~~from each other mean one or more identical or different substituents linked to any available carbon atom~~ selected from the group consisting of hydrogen, halogen, C_1-C_4- alkyl, C_2-C_4-alkenyl, C_2-C_4-~~alkinyl~~ alkynyl, halo-C_1-C_4-alkyl, hydroxy, C_1-C_4-alkoxy, trifluoromethoxy, C_1-C_4-alkanoyl, amino, amino-C_1-C_4-alkyl, *N*-(C_1-C_4-alkyl)amino, *N,N*-di(C_1-C_4-alkyl)amino, thiol, C_1-C_4-alkylthio, sulfonyl, C_1-C_4-alkylsulfonyl, sulfinyl, C_1-C_4-alkylsulfinyl, carboxy, C_1-C_4-alkoxycarbonyl, cyano and nitro;

R^1 ~~means~~ is selected from the group consisting of hydrogen, CHO, CH_2OH, ~~or~~ and a substituent of the formula **II:**



II

wherein

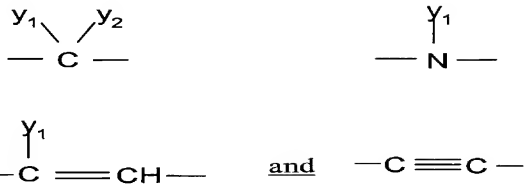
R^3 and R^4 simultaneously or are each independently from each other have the meaning ofhydrogen, C_1-C_4-alkyl or aryl ~~having the meaning of an aromatic ring as well as fused aromatic rings containing one ring with at least 6 carbon atoms or two rings with totally 10 carbon atoms and with alternating double bonds between carbon atoms~~; or

R^3 and R^4 taken together with the nitrogen atom to which they are attached form ~~N have the meaning of~~ a heterocycle or heteroaryl group ~~wherein heterocycle relates to five-member or six-member fully saturated or partly unsaturated heterocycle group containing at least one hetero atom selected from the group consisting of O, S and N and where said heterocycle can be~~ that is optionally substituted with one or two substituents ~~which are~~ selected from the group consisting of halogen, C_1-C_4 alkyl, cyano, nitro, hydroxy, C_1-C_4 alkoxy, thiol, C_1-C_4 alkylthio, amino, *N*-(C_1-C_4) alkylamino, *N,N*-di(C_1-C_4-alkyl)-amino, sulfonyl, C_1-C_4 alkylsulfonyl, sulfinyl, and C_1-C_4 alkylsulfinyl; ~~and wherein heteroaryl relates to aromatic and partially aromatic groups of a monocyclic or bicyclic ring with 4 to 12 carbon atoms and at least one of them being heteroatom selected from the group consisting of O, S and N and where said heteroaryl can be optionally substituted with one or two substituents which are selected from halogen, C_1-C_4-alkyl, cyano, nitro, hydroxy, C_1-C_4 alkoxy, thiol, C_1-C_4-alkylthio, amino, *N*-(C_1-C_4) alkylamino , *N,N*-di(C_1-C_4-alkyl) amino, sulfonyl, C_1-C_4-alkylsulfonyl, sulfinyl, C_1-C_4-alkylsulfinyl~~;

m ~~represents~~ is an integer from 1 to 3

n ~~represents~~ is an integer from 0 to 3;

Q_1 and Q_2 are each independently selected from the group consisting of ~~from each other have the meaning of~~ oxygen, sulfur, ~~or a group:~~



wherein ~~substituents~~

y_1 and y_2 are each independently selected from the group consisting of ~~from each other have the meaning of~~ hydrogen, halogen, C_1-C_4-alkyl optionally substituted with one~~, two, three~~ or more substituents selected from the group consisting of halogen ~~atom~~, hydroxy, C_1-C_4 alkoxy, thiol, C_1-C_4 alkylthio, amino, N-(C_1-C_4) alkylamino, N,N-di(C_1-C_4-alkyl)-amino, sulfonyl, C_1-C_4 alkylsulfonyl, sulfinyl and C_1-C_4 alkylsulfinyl; hydroxy; C_1-C_4-alkoxy; C_1-C_4-alkanoyl; thiol; C_1-C_4-alkylthio; sulfonyl; C_1-C_4-alkylsulfonyl; sulfinyl; C_1-C_4-alkylsulfinyl; cyano; nitro, and an aryl group optionally substituted with one~~, two, three~~ or more substituents selected from the group consisting of halogen ~~atom~~, hydroxy, C_1-C_4 alkoxy, thiol, C_1-C_4 alkylthio, amino, N-(C_1-C_4) alkylamino, N,N-di(C_1-C_4-alkyl)-amino, sulfonyl, C_1-C_4 alkylsulfonyl, sulfinyl and C_1-C_4 alkylsulfinyl ~~wherein aryl has the meaning as defined above; hydroxy; C_1-C_4-alkoxy; C_1-C_4-alkanoyl; thiol; C_1-C_4-alkylthio; sulfonyl; C_1-C_4-alkylsulfonyl; sulfinyl; C_1-C_4-alkylsulfinyl; cyano; nitro~~, or

y_1 and y_2 taken together with the carbon atom to which they are attached form a carbonyl group or an imino group; ~~or~~

~~R^1 has the maning of hydrogen provided that simultaneously R^2 has the meaning of $CH_2OCH_2CH_2Si(CH_3)_3$, $CH_2CH_2C_6H_5$, CH_2CH_2OH or a substituent of the formula II;~~

R^2 ~~means~~ is hydrogen, $CH_2OCH_2CH_2Si(CH_3)_3$, $CH_2CH_2C_6H_5$, CH_2CH_2OH or a substituent of the formula II~~, wherein formula II has the meaning as defined above~~;

and ~~their~~ a pharmaceutically acceptable salt or solvate thereof, with the proviso that when R^1 is hydrogen, R^2 is not hydrogen. ~~salts and solvates for the manufacture of pharmaceutical formulations for the treatment and prevention of diseases, damages and disorders of the central~~

~~nervous system caused by disorders of neurochemical equilibrium of biogenic amines or other neurotransmitters~~.

2. (Currently amended) ~~Use according to~~ The method of claim 1, wherein the ~~selected~~ biogenic ~~amines are~~ amine is serotonin, norepinephrine ~~and~~ or dopamine.

3. (Currently amended) ~~Use according to~~ The method of claim 1, wherein the neurotransmitter is glutamate.

4. (Currently amended) ~~Use according to claims 1, 2 or 3~~ The method of claim 1 wherein the ~~compounds~~ compound of ~~the general~~ formula ~~[[I]]~~ IA or formula IB ~~act upon the neurochemical equilibrium by regulating~~ regulates the synthesis, storage, release, metabolism, ~~storing, releasing, metabolizing and/or~~ reabsorption or receptor binding of a biogenic amine ~~amines~~ or neurotransmitter ~~neurotransmitters and binding to their receptors~~.

5. (Currently amended) ~~Use according to~~ The method of claim 4, wherein the ~~compounds~~ compound of ~~the general~~ formula ~~[[I]]~~ IA or formula IB ~~show binding affinity~~ binds to a receptor of ~~one or more~~ a biogenic ~~amines~~ amine.

6. (Currently amended) ~~Use according to~~ The method of claim 5, wherein the ~~compounds~~ compound of ~~the general~~ formula ~~[[I]]~~ IA or formula IB ~~show a significant binding affinity~~ binds to a serotonin 5-HT_{2A} ~~and~~ or 5-HT_{2C} ~~receptors~~ receptor.

7. (Currently amended) ~~Use according to~~ The method of claim 6, wherein the ~~compounds~~ compound of ~~the general~~ formula ~~[[I]]~~ IA or formula IB ~~show binding affinity to selected~~ binds to a serotonin 5-HT_{2A} or 5-HT_{2C} ~~receptors~~ receptor with an ~~in a concentration of~~ IC_{50}~~<1μM~~ of less than 1μM.

8. (Currently amended) ~~Use according to~~ The method of claim 1, wherein the ~~compounds~~ compound of ~~the general~~ formula ~~[[I]]~~ IA or formula IB ~~act as~~ binds to a σ1 receptor

~~ligands in a concentration of~~ with an IC_{50}~~<1μM~~ of less than 1 μM ~~by modulating central neurotransmitter system~~.

9. (Currently amended) ~~Use according to claims 1, 6 or 8~~ The method of claim 1, wherein the ~~compounds~~ compound of ~~the general~~ formula [[**I**]] IA or formula IB ~~show dual binding affinity~~ binds to a σ1 receptor and to at least one serotonin receptor selected from 5-HT_{2A} and 5-HT_{2C}.

10. (Currently amended) ~~Use according to~~ The method of claim 1, wherein the ~~diseases and disorders~~ disease or disorder of the central nervous system ~~are~~ is selected from the group consisting of anxiety, depression ~~and modest depression~~, bipolar disorders, sleeping disorders, sexual disorders, psychosis, borderline psychosis, schizophrenia, migraine, personality disorders, ~~and~~ obsessive-compulsive disorders, social phobia, ~~or~~ panic attacks, organic mental disorders in children, aggression, memory disorders, ~~and~~ personality disorders in elderly people, addiction, obesity, bulimia and ~~similar~~ other eating disorders, snoring, and premenstrual troubles.

11. (Currently amended) ~~Use according to~~ The method of claim 1, wherein the ~~damages of~~ damage to the central nervous system ~~are~~ is caused by trauma, brain stroke, neurodegenerative diseases, cardiovascular disorders ~~such as high blood pressure~~, thrombosis, infarct ~~as well as by~~ or gastrointestinal disorders.

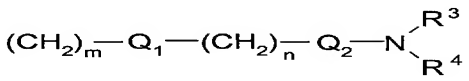
12. (Currently amended) ~~Use according to~~ The method of claim 1 wherein X ~~represents~~ is O, S, or NR^a wherein R^a is hydrogen or a substituent selected from the group consisting of C_1-C_3-alkyl, C_1-C_3-alkanoyl, C_7-C_{10}-aroyl and C_7-C_{10}-arylalkyl.

13. (Currently amended) ~~Use according to claims 1 or 12~~ The method of claim 1, wherein Y and Z are each independently ~~from each other mean one or more identical or different substituents linked to any available carbon atom~~ selected from the group consisting of hydrogen, fluorine, chlorine, bromine, C_1-C_4-alkyl, halo-C_1-C_4-alkyl, hydroxy, C_1-C_4-alkoxy,

trifluoromethoxy, C_1-C_4-alkanoyl, amino, amino-C_1-C_4-alkyl, C_1-C_4-alkylamino, *N*-(C_1-C_4-alkyl)amino, *N,N*-di(C_1-C_4-alkyl)amino, thiol, C_1-C_4-alkylthio, cyano and nitro.

14. (Currently amended) ~~Use according to claims 1, 12 or 13~~ The method of claim 1, wherein R^1 ~~has the maning of~~ is hydrogen, CHO, CH_2OH, or a substituent of the formula **II:**

II



wherein

R^3 and R^4 ~~simultaneously or~~ are each independently ~~from each other have the meaning of~~ hydrogen, C_1-C_4-alkyl, or aryl ~~wherein ary has the meaning as defined above~~; or

R^3 and R^4 taken together with [[N]] the nitrogen atom to which they are attached ~~have the meaning of~~ form a heterocycle or heteroaryl group selected from the group consisting of morpholine-4-yl, piperidine-1-yl, pyrrolidine-1-yl, imidazole-1-yl and piperazine-1-yl;

m ~~represents an~~ is an integer from 1 to 3;

n ~~represents an~~ is an integer from 0 to 3; and

Q_1 and Q_2 ~~independently from each other have the meaning of~~ are each independently oxygen or CH_2 ~~group~~;

with the proviso that when R^1 is hydrogen, R^2 is not hydrogen.

~~or~~

~~R^1 has the meaning of hydrogen provided that simultaneously R^2 has the meaning of $CH_2OCH_2CH_2Si(CH_3)_3$, $CH_2CH_2C_6H_5$, CH_2CH_2OH or a substituent of the formula **II**~~.

15. (Currently amended) ~~Use according to~~ The method of claim 1, wherein the ~~compounds~~ compound of ~~the general~~ formula **[[I]]** IA or formula IB is ~~, pharmaceutically acceptable salts and solvates thereof are~~ selected from the group consisting of:

2-(8-oxa-1,2-diaza-dibenzo[e,h]azulene-1-yl)-ethanol;

2-(8-oxa-1,2-diaza-dibenzo[e,h]azulene-2-yl)-ethanol;

2-(8-thia-1,2-diaza-dibenzo[e,h]azulene-1-yl)-ethanol;

2-(8-thia-1,2-diaza-dibenzo[e,h]azulene-2-yl)-ethanol;

(2-phenethyl-2H-8-oxa-1,2-diaza-dibenzo[e,h]azulene-3-yl)-methanol;

(2-phenethyl-2H-8-thia-1,2-diaza-dibenzo[e,h]azulene-3-yl)-methanol;

[2-(2-trimethylsilyl-ethoxymethyl)-2H-8-oxa-1,2-diaza-dibenzo[e,h]azulene-3-yl]-methanol;

[2-(2-trimethylsilyl-ethoxymethyl)-2H-8-thia-1,2-diaza-dibenzo[e,h]azulene-3-yl]-methanol;

[11-chloro-2-(2-trimethylsilyl-ethoxymethyl)-2H-8-oxa-1,2-diaza-dibenzo[e,h]azulene-3-yl]-methanol;

dimethyl-{2-[2-(8-thia-1,2-diaza-dibenzo[e,h]azulen-1-yl)-ethoxy]-ethyl}-amine;

dimethyl-{3-[2-(8-thia-1,2-diaza-dibenzo[e,h]azulen-1-yl)-ethoxy]-propyl}-amine;

dimethyl-{2-[2-(8-thia-1,2-diaza-dibenzo[e,h]azulen-2-yl)-ethoxy]-ethyl}-amine;

dimethyl-{3-[2-(8-thia-1,2-diaza-dibenzo[e,h]azulen-2-yl)-ethoxy]-propyl}-amine;

dimethyl-[2-(2-phenethyl-2H-8-oxa-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy)-ethyl]-amine;

dimethyl-[3-(2-phenethyl-2H-8-oxa-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy)-propyl]-amine;

dimethyl-[2-(2-phenethyl-2H-8-thia-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy)-ethyl]-amine;

dimethyl-[3-(2-phenethyl-2H-8-thia-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy)-propyl]-amine;

dimethyl-{2-[2-(2-trimethylsilyl-ethoxymethyl)-2H-8-oxa-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy]-ethyl}-amine;

dimethyl-[2-(1H-8-oxa-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy)-ethyl]-amine;

dimethyl-[2-(2H-8-oxa-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy)-ethyl]-amine;

dimethyl-{3-[2-(2-trimethylsilyl-ethoxymethyl)-2H-8-oxa-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy]-propyl}-amine;

dimethyl-[3-(1H-8-oxa-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy)-propyl]-amine;

dimethyl-[3-(2H-8-oxa-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy)-propyl]-amine;

dimethyl-{2-[2-(2-trimethylsilyl-ethoxymethyl)-2H-8-thia-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy]-ethyl}-amine;

dimethyl-[2-(1H-8-thia-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy)-ethyl]-amine;

dimethyl-[2-(2H-8-thia-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy)-ethyl]-amine;

dimethyl-{3-[2-(2-trimethylsilyl-ethoxymethyl)-2H-8-thia-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy]-propyl}-amine;

dimethyl-[3-(1H-8-thia-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy)-propyl]-amine;

dimethyl-[3-(2H-8-thia-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy)-propyl]-amine;

{2-[11-chloro-2-(2-trimethylsilyl-ethoxymethyl)-2H-8-oxa-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy]-ethyl}-dimethyl-amine;

[2-(11-chloro-1H-8-oxa-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy)-ethyl]-dimethyl-amine;

[2-(11-chloro-2H-8-oxa-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy)-ethyl]-dimethyl-amine;

{3-[11-chloro-2-(2-trimethylsilyl-ethoxymethyl)-2H-8-oxa-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy]-propyl}-dimethyl-amine,

[3-(11-chloro-1H-8-oxa-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy)-propyl]-dimethyl-amine; ~~and~~

[3-(11-chloro-2H-8-oxa-1,2-diaza-dibenzo[e,h]azulen-3-ylmethoxy)-propyl]-dimethyl-amine; and

a pharmaceutically acceptable salt or solvate thereof.